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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/804,621	03/12/2001	Serge Willenegger	QCPA363DIVC1	3167

23696 7590 11/13/2006
QUALCOMM INCORPORATED
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EXAMINER

WILSON, ROBERT W

ART UNIT PAPER NUMBER

2616

DATE MAILED: 11/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/804,621

Applicant(s)

WILLENEGGER ET AL.

Examiner

Robert W. Wilson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7, 9-14 and 16-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7, 9-14, & 16-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

Claim Rejections - 35 USC § 103

1. Claims 7, 9-14, & 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walton (U.S. Patent No: 5,621,723) in view of Raith (U.S. Patent No.: 5,930,706)

Referring to claim 7, Walton: A wireless communication system (col. 3 line 16 to col. 4 line 45 and per col. 6 line 46 to col. 7 line 20) comprising:

A remote station for transmitting a reverse link signal comprising a plurality of subchannel signals (mobile transmits signal to the base on a one of 8 channels (subchannel per col. 3 line 16 to col. 4 line 45 and per col. 6 line 46 to col. 7 line 20)

A base station for independently adjusting the transmission power of one or more of said plurality of subchannels by generating a power control message for adjusting the transmit power of at least one of said plurality of subchannel signal in accordance with a type of data communicated by the corresponding subchannel (The base station sets bits in the into the power control subchannel which are sent to the mobile to control one of eight channels which vary based upon rate (type) per col. 3 line 16 to col. 4 line 45 and per col. 6 line 46 to col. 7 line 20)

A comparator for comparing a frame error rate of at least one of said subchannel signals with a frame error rate threshold for said generating said power control message (The base station compares the power received to a fixed threshold and generates bits in the power control subchannel (power control message) per col. 3 line 16 to col. 4 line 45 and per col. 6 line 46 to col. 7 line 20)

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Walton does not expressly call for: comparing FER to a threshold but teaches comparing power to a threshold per col. 6 line 46 to col. 7 line 19

Raith teaches: that in addition to received signal power that FER can be used in comparison to a threshold per col. 18 lines 28 to 49

It would have been obvious to one of ordinary skill in the art at the time of the invention add measuring FER of Raith in place of measuring signal power of Walton because both FER and signal power are quality measurements which can be utilized to determine the deterioration of a channel.

Referring to claim 9, the combination of Walton and Raith teach: the communication system as recited in claim 7 wherein a frame error rate is measured for each subchannel

The combination of Walton and Raith do not expressly call for: FER varying based upon type of data.

Walton teaches: signal threshold varies based upon channel rate or type of data in one of the eight channels per col. 3 line 16 to col. 4 line 45 and per col. 6 line 46 to col. 7 line 20)

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the signal threshold varying based upon type of data of Walton the to system of the combination of Walton and Raith in order to build a system in which QOS can be varied based upon the signal rate.

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Referring to claim 10 the combination of Walton and Raith teach: the communication system as recited in claim 7 further comprising having a plurality of thresholds each corresponding to subchannel (one of eight channels) in accordance with measuring frame error rate at each of the subchannels (one of eight channel)

The combination of Walton and Raith do not expressly call for: a threshold generator

Walton teaches having a different threshold for each frequency rate per col. 3 line 16 to col. 4 line 45 and per col. 6 line 46 to col. 7 line 20

It would have been obvious to one of ordinary skill in the art at the time of the invention to add a signal generator to the system of Walton and Raith in order to support the different threshold associated with processing different frequency rates.

Referring to claim 11, the combination of Walton and Raith teach: the communication system as recited in claim 7 and Walton teaches wherein said power control message includes a least a plurality of bits, wherein each bit represents a command for a predetermined amount (bits in the power control subchannels are in 1 dB steps per col. 6 line 45 to col. 7 line 20.

The combination of Walton and Raith do not expressly call for: increase or decrease

Walton teaches: power control message includes a least a plurality of bits, wherein each bit represents a command for a predetermined amount (bits in the power control subchannels are in 1 dB steps per col. 6 line 45 to col. 7 line 20.

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It would have been obvious to one of ordinary skill in the art at the time of the invention that the 1 db steps or Walton would be added to the system of the combination of Walton and Raith in order to increase and or decrease the power because just increasing or decreasing the power would cause the power to become unbounded and the invention would not work.

In Addition Walton teaches:

Regarding claim 12, wherein the base station generates a plurality of channel gain values wherein each gain value is applied to one of said plurality of subchannel signal for said adjusting the transmission power or said subchannel (col. 6 line 45 to col. 7 line 19)

Referring to claim 13, the combination of Walton and Raith teach: the communication system as recited in claim 7 and measuring the FER

The combination of Walton and Raith do not expressly call for: a plurality of decoders

Walton teaches: measuring the power for each subchannel per col. 3 line 16 to col. 4 line 45 and per col. 6 line 46 to col. 7 line 20)

It would have been obvious to one of ordinary skill in the art at the time of the invention to add a plurality of decoders to perform the measurement on each subchannel of Walton to the system of the combination of Walton and Raith in order to build a system which independently measures power on each of the subchannels.

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Referring to claim 14, Walton teaches: A method in a wireless communication system (col. 3 line 16 to col. 4 line 45 and per col. 6 line 46 to col. 7 line 20) comprising:

transmitting a reverse link signal from a remote station wherein the reverse link comprises a plurality of subchannel signals (The mobile transmits on the reverse link 8 channels (subchannels) per col. 3 line 16 to col. 4 line 45 and per col. 6 line 46 to col. 7 line 20)

adjusting independently, the transmission power of one or more of said plurality of subchannel signals at a base station by generating a power control message for adjusting the transmit power or at least one of said plurality of subchannel signals (The base station sets bits in the power control subchannel which are sent to the mobile to control one of eight channels which vary based upon rate (type) per col. 3 line 16 to col. 4 line 45 and per col. 6 line 46 to col. 7 line 20)

comparing a frame error rate of at least one of said subchannel signals with a frame error rate threshold for said generating said power control message (The base station compares the power received to a fixed threshold and generates bits in the power control subchannel (power control message) per col. 3 line 16 to col. 4 line 45 and per col. 6 line 46 to col. 7 line 20)

Walton does not expressly call for: comparing FER to a threshold but teaches comparing power to a threshold per col. 6 line 46 to col. 7 line 19

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Raith teaches: that in addition to received signal power that FER can be used in comparison to a threshold. per col. 18 lines 28 to 49

It would have been obvious to one of ordinary skill in the art at the time of the invention add measuring FER of Raith in place of measuring signal power of Walton because both FER and signal power are quality measurements which can be utilized to determine the deterioration of a channel.

Referring to claim 16, the combination of Walton and Raith teach: the method as recited in claim 14 wherein a frame error rate is measured for each subchannel

The combination of Walton and Raith do not expressly call for: FER varying based upon type of data.

Walton teaches: signal threshold varies based upon channel rate or type of data in one of the eight channels per col. 3 line 16 to col. 4 line 45 and per col. 6 line 46 to col. 7 line 20)

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the signal threshold varying based upon type of data of Walton to the system of the combination of Walton and Raith in order to build a system in which QOS can be varied based upon the signal rate.

Referring to claim 17 the combination of Walton and Raith teach: the method as recited in claim 14 further comprising having a plurality of thresholds each corresponding to subchannel (one of

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eight channels) in accordance with measuring frame error rate at each of the subchannels (one of eight channel)

The combination of Walton and Raith do not expressly call for: a threshold generator

Walton teaches having a different threshold for each frequency rate per col. 3 line 16 to col. 4 line 45 and per col. 6 line 46 to col. 7 line 20

It would have been obvious to one of ordinary skill in the art at the time of the invention to add a signal generator to the system of Walton and Raith in order to support the different threshold associated with processing different frequency rates.

Referring to claim 18, the combination of Walton and Raith teach: the method as recited in claim 14 and Walton teaches wherein said power control message includes a least a plurality of bits, wherein each bit represents a command for a predetermined amount (bits in the power control subchannels are in 1 dB steps per col. 6 line 45 to col. 7 line 20.

The combination of Walton and Raith do not expressly call for: increase or decrease

Walton teaches: power control message includes a least a plurality of bits, wherein each bit represents a command for a predetermined amount (bits in the power control subchannels are in 1 dB steps per col. 6 line 45 to col. 7 line 20.

It would have been obvious to one of ordinary skill in the art at the time of the invention that the 1 db steps or Walton would be added to the system of the combination of Walton and Raith in

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order to increase and or decrease the power because just increasing or decreasing the power would cause the power to become unbounded and the invention would not work.

In Addition Walton teaches:

Regarding claim 19, wherein the base station generates a plurality of channel gain values wherein each gain value is applied to one of said plurality of subchannel signal for said adjusting the transmission power or said subchannel (col. 6 line 45 to col. 7 line 19)

Applying each gain value to one of said plurality of subchannel signals for adjusting the transmit power of said subchannel signals (power control bits are placed in the power control subchannel for adjusting the transmit power of each channel per 6 line 45 to col. 7 line 20)

Referring to claim 20, the combination of Walton and Raith teach: the method as recited in claim 14 and measuring the FER

The combination of Walton and Raith do not expressly call for: a plurality of decoders

Walton teaches: measuring the power for each subchannel per col. 3 line 16 to col. 4 line 45 and per col. 6 line 46 to col. 7 line 20)

It would have been obvious to one of ordinary skill in the art at the time of the invention to add a plurality of decoders to perform the measurement on each subchannel of Walton to the system of the combination of Walton and Raith in order to build a system which independently measures power on each of the subchannels.

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Response to Arguments

4. Applicant's arguments with respect to claims 7, 9-14, & 16-20 have been considered but are moot in view of the new ground(s) of rejection.

Refer to the above rejection for details.


Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert W. Wilson whose telephone number is 571/272-3075.

The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on 571/272-7629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Robert W Wilson
Examiner
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RWW

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